

Title (en)

FLUID PROPERTY SENSING WITH ELECTRODES

Title (de)

FLUIDEIGENSCHAFTENERFASSUNG MIT ELEKTRODEN

Title (fr)

DÉTECTION DES PROPRIÉTÉS D'UN FLUIDE À L'AIDE D'ÉLECTRODES

Publication

EP 3446112 B1 20210602 (EN)

Application

EP 16721996 A 20160421

Priority

US 2016028633 W 20160421

Abstract (en)

[origin: WO2017184144A1] In one example in accordance with the present disclosure a fluid property sensing device is described. The fluid property sensing device includes a substrate having a trench formed therein. The trench includes a bottom surface and opposite side surfaces. A first electrode is disposed on a first side surface of the trench and a second electrode is disposed on a second side surface of the trench. The first electrode and second electrode form a capacitor to measure a complex impedance of a fluid that fills a space between the first electrode and the second electrode. This complex impedance indicates a property of the fluid. A fluid level sensing die, having a number of fluid level sensing components disposed thereon, may be attached to the substrate, preferably in such a way that the fluid level sensing die is surrounded by the trench. In this way the surface area of the electrodes provided in the trench can be increased. The number of level sensing components may be thermal sensing components.

IPC 8 full level

G01N 27/22 (2006.01); **B41J 2/175** (2006.01); **B41J 2/195** (2006.01); **G01F 23/24** (2006.01); **G01F 23/26** (2006.01)

CPC (source: EP US)

B41J 2/17513 (2013.01 - EP US); **B41J 2/1753** (2013.01 - EP US); **B41J 2/17566** (2013.01 - EP US); **B41J 2/195** (2013.01 - EP US); **G01F 23/247** (2013.01 - EP); **G01F 23/261** (2013.01 - EP); **G01F 23/263** (2013.01 - US); **G01F 23/265** (2013.01 - US); **G01F 23/268** (2013.01 - US); **G01N 27/221** (2013.01 - US); **G01N 27/226** (2013.01 - EP US); **G01N 33/32** (2013.01 - US); **B41J 2002/17579** (2013.01 - EP US); **G01F 23/247** (2013.01 - US); **G01F 23/261** (2013.01 - US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2017184144 A1 20171026; CN 109073583 A 20181221; CN 109073583 B 20210720; EP 3446112 A1 20190227; EP 3446112 B1 20210602; US 11009383 B2 20210518; US 2019120678 A1 20190425

DOCDB simple family (application)

US 2016028633 W 20160421; CN 201680084827 A 20160421; EP 16721996 A 20160421; US 201616092572 A 20160421